



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,082	11/16/2000	Lewis T. Donzis	NORR0007US(12514RXUS02U)	5132

21906 7590 10/26/2004

TROP PRUNER & HU, PC  
8554 KATY FREEWAY  
SUITE 100  
HOUSTON, TX 77024

EXAMINER

LAZARO, DAVID R

ART UNIT PAPER NUMBER

2155

DATE MAILED: 10/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b>	Application No. 09/714,082	Applicant(s) DONZIS ET AL.	
	Examiner David Lazaro	Art Unit 2155	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED                      FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

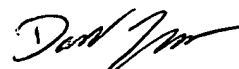
Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 2-10,12,13,16,17,19-26,28-30 and 32-39.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

  
**HOSAIN ALAM**  
ADVISORY PATENT EXAMINER

  
10/19/04

Continuation of 5. does NOT place the application in condition for allowance because:

Applicants' argue - "It is respectfully submitted that the Layer 2 test packet as taught by Grosser cannot be protected according to a security protocol."

Examiner's Response: A layer 2 packet, such as a L2TP packet, can be protected by a security protocol. When an L2TP tunnel is established over an IP network, such as the internet (Col. 3 lines 4-17), the L2TP frames are encapsulated in UDP packets. When a Layer 2 tunnel, such as a L2TP tunnel, is used in conjunction with IPsec as suggested by Grosser (Col. 4 lines 23-29), the IPsec protocol ESP functionality provides for protection of UDP packets between the two endpoints of the L2TP tunnel, which would therefore protect any L2TP frames encapsulated in the UDP packets. Therefore a Layer 2 test packet can be protected. See Sections 9.2 - 9.4 of RCF 2661 for related information on L2TP and IPsec. (RFC 2661 was provided by Applicants through the IDS submitted 02/12/04).

Applicants argue - "...there is no reason for the Layer 2 test packets to be protected by the IPsec packet encryption mentioned in column 4, at lines 23-29 of Grosser...nowhere in Grosser is there any indication that the Layer 2 test packets are themselves protected by IPsec. Encrypting a lower level test packet, such as a Layer 2 test packet, using a higher level security protocol, such as IPsec, does not make much practical sense."

Examiner's Response: Grosser explicitly states "Because of the absence of access regulation and inconsistent security enforcement across its constituent networks, data communication over the Internet is vulnerable to interception, redirection, and other forms of tampering. In order to provide an enhanced level of security for communication conducted over the Internet (or other public network), Virtual Private Networks (VPNs) were developed." (Col. 1 lines 25-35). As the point of establishing a VPN over a public network is to provide security in some form, it would be reasonable to test the secure VPN, such as one established using L2TP and IPsec as explicitly suggested by Grosser (Col. 4 line 23-29), by sending a secure test packet. Not only would this ensure "connectivity and responsiveness" of a secure L2TP tunnel VPN (Col. 1 lines 10-15), but would also provide security by, for example, preventing "interception, redirection, and other forms of tampering" of the test packet. Furthermore, as stated above, a Layer 2 packet is, in some cases, expected to be encrypted by a security protocol, such as IPsec, as evident from Sections 9.2 - 9.4 of RCF 2661.

Applicants argue - "There simply did not exist any reason to incorporate the teachings of Reid regarding ICMP ping messages into the Layer 2 tunnel testing mechanism of Grosser...the focus of Grosser is on testing Layer 2 tunnels with Layer 2 test packets...It is respectfully submitted that an ICMP ping message, as taught by Reid, cannot be used to test a Layer 2 tunnel...It is highly unlikely that an ICMP message associated with a higher-level protocol can be used to successfully test a Layer 2 tunnel. More fundamentally, as Layer 2 test packets are available for testing Layer 2 tunnels, there would have been absolutely no reason whatsoever to employ a different level message, such as the ICMP ping message."

Examiner's Response: Grosser does not state the test packet must be a Layer 2 packet. A preferred embodiment is stated as using layer 2 packets corresponding to the actual type of layer 2 tunnel, however, Grosser teachings are open ended in terms of a protocol used for a test packet (Col. 6 lines 30-60). As such, an ICMP ping message would be a reasonable test packet as it is commonly known (Reid Col. 15 lines 59-61) for testing "connectivity and responsiveness" between two endpoints, which can include the endpoints of a layer 2 tunnel. Furthermore, since ICMP runs on top of IP, it can be protected by IPsec when IPsec is used in conjunction with a Layer 2 tunnel.

Continuation of 7. The amended claims would be rejected based on the citations set forth in the Office Action mailed 07/16/04. Specifically, Claims 2, 3, 6, 7, 8, 12, 13, 19-23, 26, 28, 30, and 32-39 are rejected under 35 U.S.C §102(e) as being anticipated by Grosser, Claims 4, 5, 16, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grosser in view of U.S. Patent 6,182,226 by Reid et al., and Claims 9, 10, 24, 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grosser in view of U.S. Patent 6,636,898 by Ludovici et al.